Montana Department of Environmental Quality
Remediation Division
Petroleum Release Section

DEQ-PRS Technical Guidance Document #15
Prioritization of Petroleum Release Sites

I. Scope

The Department of Environmental Quality (DEQ) Petroleum Release Section (PRS) must ensure that finite resources available for cleanup of petroleum releases are prioritized to those sites that pose the greatest risk to human health and the environment. Because DEQ does not possess adequate resources to address all petroleum release sites simultaneously, work efforts must be focused on higher risk sites before conducting work at lower risk sites. The efficiency and effectiveness of the owner or operator (O/O) and their representatives to respond to and properly conduct corrective action greatly influences DEQ's ability to move sites through the remediation process, and ultimately, to closure.

II. Overview

PRS project managers will determine the relative priority of petroleum release sites assigned to them using the PRS Priority Ranking Form in Appendix A. Assignment of sites based on this prioritization procedure applies only to Petroleum-Funded sites and other non-LUST Trust sites. The PRS Manager, will assign/unassign sites to PRS project managers based primarily on Priority Ranking Form results and overall staff workload considerations. All new releases that represent a current or probable significant risk to human health or the environment will be actively addressed by PRS until adequate data are collected to complete the Priority Ranking Form with reasonable certainty. If adequate information is provided within the 30-Day Release Report for new releases that demonstrate the release represents a low priority, it will be ranked accordingly. Existing sites that are inactive will remain inactive unless site conditions change in the future, new information becomes available indicating they may represent a greater risk than presently known, or all higher priority sites have been addressed.

When staff resources are not available to address a petroleum release site with a low-to-medium priority ranking, DEQ will notify the owners and operators of their site's status. The PRS staff will review inactive site files at least every five years to ensure their relative priority hasn't changed with respect to other sites and their inactive status remains appropriate.

The PRS Manager must balance section workload priorities between workplan reviews, report reviews, site closures, and other activities required to administer corrective action.

When this guidance is finalized in the summer of 2003, all active sites will be prioritized using the procedures herein. This initial ranking process will be accomplished within 180 days of completion of this technical guidance document.

III. Prioritization and Site Assignment

High-Priority Sites

All high-priority sites will be assigned to PRS project managers and actively addressed. Once work is initiated on a high priority site the site will be actively managed to closure.

High-priority sites are those that are known, or have strong probability, to:

- impact aquifers actively being used for drinking water withdrawal with contaminants at concentrations above WQB-7 standards or RBSLs,
- generate subsurface vapors that will collect in structures, including subterranean utilities and vaults, at elevated concentrations and may affect human health or create explosive/fire hazards,
- impact surface water that is used for drinking water supplies with contaminants at concentrations above WQB-7 standards or RBSLs,
- exhibit surface soil (0 –2 feet below ground surface) contamination at concentrations that pose a strong potential to impact human health through ingestion, inhalation or dermal contact,
- impact a drinking water supply line through permeation of the pipe, line, or other component of the water supply system with concentrations of contaminants above WQB-7 standards or RBSLs, or
- impair a sensitive environment or an endangered species.

Low-to-Medium Priority Sites

Low-to-medium sites are classified as those sites that do not represent a significant or imminent threat to human health or the environment as defined within the high priority sites category.

The PRS will maintain an active case load of approximately 50 high-priority petroleum release sites per project manager and up to 25 low-to-medium priority "long-term monitoring sites" that require minimal oversight. Project managers will initiate work on the highest-ranking sites from the inactive site pool as high-priority sites are remediated and re-ranked to low-priority status, are in long-term monitoring, or when sites are closed.

When turnover occurs, high-priority sites will be temporarily reassigned to remaining staff members until the vacant position is filled. Remaining PRS staff members will temporarily suspend work on their mid-to-low priority sites in order to effectively manage reassigned high-priority sites. Preference will be given to high-priority sites over lower-priority sites whenever workload exceeds PRS project management capabilities.

Project managers will actively address new releases where actual risk has not yet been determined through a site assessment, until adequate data are available to establish or predict priority with reasonable certainty. The PRS Manager and project managers will use the Priority Ranking Form in Appendix A and their professional judgment to determine whether adequate data are available to assess risk for the purposes of prioritizing additional site assessment work. The PRS will consider additional data or rationale provided by an O/O or their representative in making this determination.

Once priority is determined with reasonable certainty, the PRS Manager will decide whether staff resources are available to continue addressing the site. Although Priority Ranking Form

values are the primary tool for determining which release sites should be addressed first, the PRS manager will consider other factors to best manage all petroleum releases with finite resources. Those non-risk based factors may include the following:

Ongoing Active Remediation

If an engineered remediation system, such as a VES, is effectively removing contamination from a lower priority site, it should be continued as long as it remains effective and cost efficient. Modifications, expansions, or significant repairs of a great enough scale that typically requires an approved work plan will be considered on a priority basis.

Adjacent Releases and Sites

PRS will address lower-priority sites when their contaminant plumes commingle with plumes of a higher-priority release, and addressing both sites simultaneously if the work on both sites can be coordinated and conducted in an efficient manner.

Real-estate Transactions/Property Development

Property transfers of former UST sites frequently raise many questions regarding cleanup and closure. PRS staff will evaluate suspected releases at abandoned UST sites for the purpose of determining potential risks to human health and the environment so that the site can be ranked. If such sites receive a low-priority status, they will be treated like other low-priority sites. The PRS manager may actively assign a lower-priority site when contamination is hindering the sale of an idle property, and property redevelopment would benefit the community where the site is located. DEQ will consider redevelopment plans and requests from local governments. Funding from USTfields/Brownfields Programs may become available at these sites to assist property owners with site assessment activities and eventual site cleanup.

Cleanup Opportunities

PRS may consider addressing lower-priority sites when an opportunity for cleanup presents itself that may not reoccur for a long period of time. Examples of cleanup opportunities include highway reconstruction, razing of a building, or removal of other improvements that have hindered cleanup. It should be noted that factors creating a cleanup opportunity (e.g. demolition of a building, or removal of other improvements) are the responsibility of the owner/operator of a facility. These limiting factors shall be addressed prior to DEQ considering prioritizing work at an opportunistic cleanup. The cost benefit of addressing cleanup under these circumstances will be evaluated on an individual site basis.

When PRS staff resources are unavailable to work on a lower-priority petroleum release site, the PRS Manager will send a notice to the owner/operator of the site and the local government representative (typically a city or county health officer or sanitarian). A copy of a typical "low-priority notice letter" is included in Appendix B. The notice will explain the site's prioritization status and a copy of the current Priority Ranking Form. If an owner/operator disagrees with the ranking or has additional information, he/she may respond in writing explaining why they believe a different priority should be assigned. PRS staff will consider this information. If a consensus is not reached, the PRS project manager will meet with the owner/operator to review site-specific information and attempt to reach consensus on the priority of the site. If the owner/operator or local government do not agree with the PRS Manager's final determination, they can address their concerns to the Hazardous Waste Site Cleanup Bureau Chief, or Remediation Division Administrator.

As the PRS Staff progressively moves high-priority sites through the remediation process, these sites will achieve a long-term monitoring status or brought to closure. Resource constraints may lead the program to periodically re-rank sites following completion of major work efforts that provide additional data, such as phases of remedial investigation or cleanup actions. Once cleanup begins at a site, PRS will endeavor to continue to address the site completely through the closure process, regardless of the re-ranked priority. However, if resource constraints require stopping work at sites where cleanup has already begun, the most current priority ranking value will be used in the decision.

Appendix A:
Priority Ranking Form

Petroleum Release Site
Priority Ranking Sheet

To be completed by DEQ Project Manager

Facility Name: Some Facility, Someplace, MT
Facility ID/ Release #:
Project Manager:
Date:

FINAL SCORE

24	I. Human Health Impacts
12	II. Environmental Impacts
5	III. Third Party/ Utility Corridor Impacts
41	**Score = (I + II + III)**

I. Human Health Impacts

A. Water Supply Impact

12	Impacted
6	Possible Threat
1	Slight Threat
0	No Threat **must state reason for this choice**
6	**Score**

B. Type of Water Supply

12	Current/In-Use Public Drinking Water
6	Agricultural/ Industrial Water
0	No Threat
12	**Score**

C. Toxic or Explosive Vapors

12	Vapors Present or Reported
3	Possible Threat
0	No Threat **must state reason for this choice**
0	**Score**

D. Type of Structure

12	Residence **must state reason for this choice**
9	Commercial **must state reason for this choice**
0	No Threat
0	**Score**

E. Soil Contamination

6	0-2 feet below ground surface
2	> 2 feet below ground surface
0	No soil contamination
6	**Score**

II. Environmental Impacts

F. Impact to Surface Water or Groundwater

10	Impacted
7	Probable Threat
5	Possible Threat
2	Slight Threat
0	No Threat **must state reason for this choice**
5	**Score**

G. Type of Water Impacted

10	Surface Water
7	Potable Groundwater
2	Non Potable Groundwater
0	No Impact
7	**Score**

H. Free Product Status

10	Free product/ Sheen present
5	Free product possible
0	No free product present/ possible
0	**Score**

III. Third Party/ Utility Corridor Impacts

I. Impact to Property

8	Impacted
4	Possible Threat
1	Slight Threat
0	No threat
1	**Score**

J. Utility/Property Type

8	Open Utilities
4	Closed utilities/ other third party property
0	No threat
4	**Score**

DEQ Project Manager Comments:

Guidelines for filling out Priority Ranking Sheet

I. Human Health Impacts

A. Potential for Water Supply Impact
12 points—Water supply (well, surface water, water supply line used for drinking water) is impacted
6 points—Possible threat to water supply (contamination source is less than 1000 feet from drinking water supply)
3 points—Slight threat to water supply (contamination source is greater than 1000 feet from drinking water supply)
0 points—No threat to drinking water supply ***Must state reason for this choice***

B. Type of Water Supply
12 points—Current/ In-use Public Drinking Water (surface water or groundwater supply or private supply line which serves as primary source of drinking water)
6 points—Agricultural/ Industrial Water Supply (surface water or groundwater supply or supply line used for livestock, irrigation or industrial processing; potential for ingestion by animals and accidental ingestion/ dermal exposure to humans)
0 points—No threat to water supply

C. Potential for Impact from Toxic or Explosive Vapors
12 points—Vapors present or reported in structure or utility corridor
3 points—Possible threat of impact due to proximity of release to structure or utility corridor
0 points—No potential impact ***Must state reason for this choice***

D. Type of Structure Impacted by Toxic or Explosive Vapors
12 points—Residence (one or more persons potentially impacted with the potential for exposure greater than 8 hours per day; examples include schools, daycares, hospitals, and private residences) ***Must state reason for this choice***
9 points—Commercial/ Industrial (one or more persons potentially impacted with the potential for exposure less than 8 hours per day; examples include office buildings, stores, service stations, factories) ***Must state reason for this choice***
0 points—No structure impacted or threatened

E. Potential for Impact from Soil Contamination
6 points— Soil contamination is found less than 2 feet below ground surface
2 points—Soil contamination is found greater than 2 feet below ground surface
0 points—No soil contamination present

II. Environmental Impacts

F. Potential for Impact to Surface Water or Groundwater
10 points—Surface water or groundwater is impacted
7 points—Probable threat to water (water has not been impacted, but contamination source or plume is less than 250 feet away from surface water, or groundwater is less than 10 feet below contamination)
5 point—Possible threat to water (water has not been impacted, but contamination source or plume is greater than 250 feet but less than 500 feet away from surface water, or groundwater is 10-20 feet below contamination)
2 points—Slight threat to water (water has not been impacted, but contamination source or plume is greater than 500 feet away from surface water, or groundwater is greater than 20 feet below contamination)
0 points—No potential for surface water or groundwater impact ***Must state reason for this choice***

G. Type of Water Impacted or Potentially Impacted
10 points—Surface water impacted
7 points—Potable groundwater impacted (Class I /Class II groundwaters with a natural specific conductance less than or equal to 2500 microsiemens/centimeter, or Class III groundwaters with a natural specific conductance less than 7000 µS/cm)
2 points—Non-potable groundwater impacted (Class III/ Class IV groundwaters with a natural specific conductance greater than 7000 µS/cm)
0 points—Water is not impacted or threatened

H. Free Product
10 points—Free product (sheen or measurable quantity of petroleum hydrocarbons) is present
5 points—Free product is possible (free product may be present based on depth to groundwater, extent/ magnitude of contamination and other site conditions)
0 points—Free product not present or possible

III. Third Party Property/ Utility Corridor Impacts

I. Impact of Property
8 points—Third party property or utility corridor is impacted
4 points—Possible threat to third party property or utility corridor (property not yet impacted, but contamination plume is less than 100 feet from third party property or utility corridor)
1 point—Slight threat to third party property or utility corridor (property not yet impacted, but contamination plume is greater than 100 feet from third party property or utility corridor)
0 points—No threat to third party property or utility corridor

J. Property Type Impacted or Potentially Impacted
8 points—Open utilities (sewer lines, water supply lines, irrigation systems, natural gas pipelines, storm drains, etc)
4 points—Closed utilities or third party property other than utility lines (closed utilities include electric lines, phone lines, television cables, communication lines, etc; third party property includes structures, water, soil, vapors, etc)
0 points—No threat of impact

Appendix B:
Low-Priority Notice Letter
(Example)

<Date>

<RP Name>
<Address>
<City, State Zip Code>

Subject: Status of the Petroleum Release at Facility Name, Town, MT; **Facility ID# FID, Release#.**

Dear Mr., Mrs., Ms. Owner Operator:

The Department has recently completed a review of all petroleum release sites in order to establish workload priorities. The purpose of this letter is to advise you that the above referenced petroleum release site is one of many listed as 'active' in the Department of Environmental Quality's (DEQ's) files. However because other sites have petroleum releases that pose a greater risk to the environment and public health, DEQ is suspending additional work needs for this site. Although your release site is still listed as 'active', information indicates that it poses less of a threat than other release sites in the state. DEQ is not currently requiring investigation or cleanup activities at this site. Please be aware that THIS LETTER IS NOT A "NO FURTHER CORRECTIVE ACTION REQUIRED" LETTER. Additional corrective action may be required in the future, but not at this time.

Department resources are only available to address the highest priority release sites. Therefore, DEQ must defer work at lower-priority release sites to a later date. As work is completed at higher-priority releases, resources will become available to address any additional cleanup that may be necessary at the lower-priority sites. The DEQ will contact you when resources become available to address this release. Promptly notify DEQ if this site transfers to another owner in the meantime.

A copy of the Priority Ranking Form for this release site is included for your records. If you believe that DEQ incorrectly prioritized your release, or you have additional information that would affect prioritization or would document compliance with closure standards, please feel free to write or call me at (406) 444-5976.

Sincerely,

Jeffrey A. Kuhn
Manager, DEQ Petroleum Release Section

Enclosure: Risk-Based Prioritization Form with procedures

Name.doc

cc: PTRCB
<City/County Health Office>
<Consultant>
<others to CC:>